RESEARCH ARTICLE

ASSESSMENT AND ANALYSIS OF MEDICATION APPROPRIATENESS USING BEERS CRITERIA IN ELDERLY

[1]Dr. Shilpa Avarebeel and [2],*Dr. Prathiba Pereira

[1]Consultant Physician, Dept of Medicine and Geriatrics, JSS Hospital, India
[2]HOD, Department of Geriatrics, JSS hospital Mysuru

ARTICLE INFO	ABSTRACT
	The ageing population is steadily expanding, with associated increased use of medications. polypharmacy (>4 drugs) is observed on regular basis causing untoward effects Beers criteria given by American geriatric society is widely used and guides in preventing adverse drug reactions. This study 'Assessment and analysis of medication appropriateness using beers criteria in elderly' Was conducted at JSS hospital Mysore as a pilot study with a sample size of 826 .data regarding number of medications was collected from the inpatient files and was assessed for poly pill and medication appropriateness using Beers criteria. Statistics was analysed using SPSS software- Results Total 826 inpatient files were analysed.510 were males, polypharmacy was noticed in 600 patients. Majority of the prescriptions were as per Beer's criteria, However incidence of ADR was significantly high in those who did not follow Beers criteria .Using Beer's criteria is very much faesible. Pocket card is widely available and a mobile app is available for a nominal amount of Rs 600 per year **Conclusions:** Awareness about the Beers criteria in medical schools and conducting workshops for the same would definitely improvise the quality care for the geriatric group.

INTRODUCTION

- The ageing population is steadily expanding, with associated increased use of medications. An elderly patient taking several medications at the same time, is potential for drug related problems. Elderly patients are particularly susceptible to polypharmacy issues because ageing affects how their body handles medications.

The treating doctors should be aware of the risks associated with polypharmacy and fully evaluate all medications at each patient visit to prevent polypharmacy from occuring

- This can be prevented by following a standard protocol before prescribing elders. Presently Beers criteria given by American geriatric society is widely used and serves the purpose.

Aims and objectives
Primary Objective

- To evaluate the appropriateness of medications in elderly Using Beers criteria in JSS hospital Medicine department.

Corresponding author: **Dr. Prathiba Pereira,**
HOD, Department of Geriatrics, JSS hospital Mysuru.

Secondary Objective

- To analyse the prescription for Polypharmacy(more than 4 drugs)
- To look for ADR
- To assess the feasibility of using Beers criteria

Sample size

826 was considered as sample size for the pilot study.

METHODOLOGY

- Data regarding number of medications was collected from the inpatient files and was assessed for polypill and were also assessed for the medication appropriateness using beers criteria. Statistics was analysed using SPSS software.
- Lab investigation -Nil

Source of data- elderly in patent files from General Medicine department

- Type of study- prospective Descriptive study
- Study setting- Department of Medicine, JSS Hospital, Mysore.
- Inclusion criteria: All elderly (above 60 years)in patient files.

Exclusion criteria-Critically ill patients, Outpatients.

RESULTS

Total of 826 inpatient files were observed and data collected.
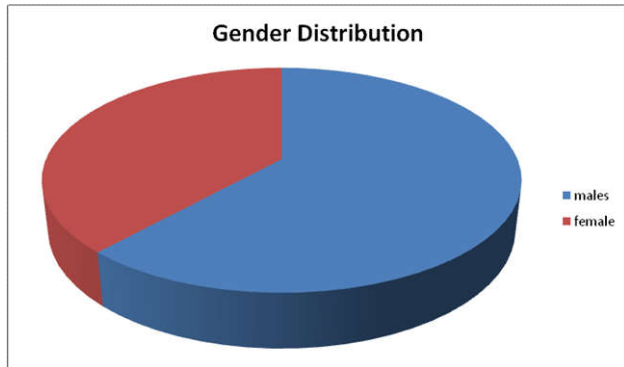

Figure 1.Gender distribution

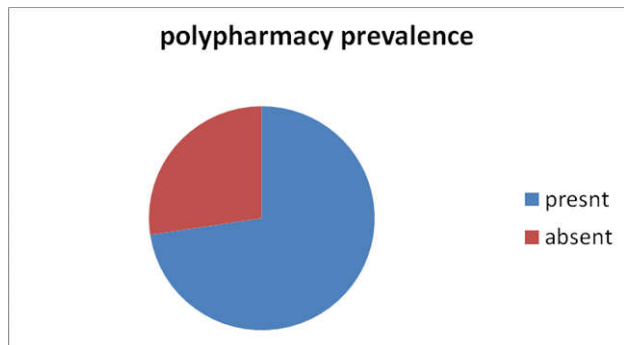Among the 826 study population, 510(62%) were males.

Figure 2. prevalence of polypharmacy
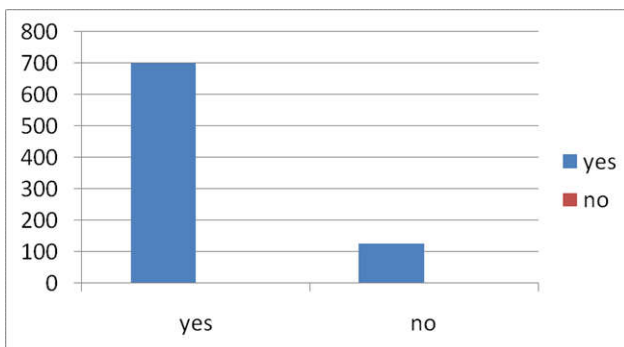
Polypharmacy was observed in 600 (73%) individuals.

Figure 3 .Followed Beer's criteria

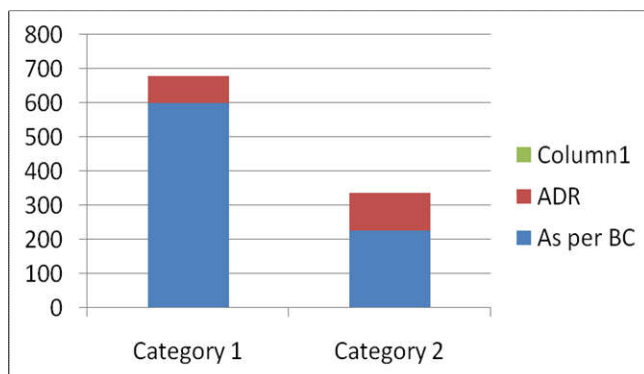700 Prescription were as per beers criteria.

Figure. 4. ADR incidence

Among the 600 prescriptions who followed Beers criteria only 80 developed ADR, However significant number of patients (126) developed ADR in those who did not follow Beers and majority improved after the withdrawal of he drug .

RESULTS

- Total 826 inpatient files were analysed.
- 510 were males
- polypharmacy was noticed in 600 patients
- Majority of the prescriptions were as per Beer's criteria, However incidence of ADR was significantly high in those who did not follow Beers criteria .
- Using Beer's criteria is very much faesible.
- Mobile app is available for a nominal amount of Rs. 600 per year.

DISCUSSION

- The elderly face variety of health issues and undergo multiple investigations and land up with polypill., which leads to untoward consequences related to the drug. This is exponentially growing for the last decades globally.
- One way to protect elderly patient from the potentially harmful consequences of polypharmacy is by knowing which drug frequently cause problems in this age group. The Beers criteria , a system first developed in 1991 helps to identify those medications that are potentially harmful to the elderly. (1)
- However, it is important to remembe r that the criteria does not ban the use of certain medications for all elderly patients; instead, they emphasize those that " should generally be avoided" either because they are ineffective or because they pose a high risk and a safe alternative is available.(1) As always emphasized , it is the clinical judgement which holds a upper hand.As observed in the present pilot study, majority had polypill , However most of the prescriptions were as per Beers .
- significant Adverse drug reactions were noted in those who did not follow beers criteria.
- In our study the commonest ADR noticed was nausea , vomiting, giddiness which improved after withdrawal of the drug.
- ADE's vary widely and it may be difficult to distinguish the adverse effects of a drug from the symptoms of disease, its wise to consider any new sign or symptom to be drug- related until proven otherwise (2,3)
- New onset GI distress is often caused by medication. One study found that the most common ADE's among elderly were nausea, vomiting, diarrhoea, constipation and abdominal pain. (4)
- An elderly is more sensitive than a younger one to drugs that affect the CNS, consider the possibility that any change in mental status is drug- related.
- Long acting benzodiazepines such as diazepam , can cause drowsiness, impaired memory, confusion and prolonged sedatoion which increases an elderly patient's risk for falls and fractures.

Conclusion and Recommendations

Practitioners should be emphasized to minimise the usage of drugs in elderly.

Following Beers criteria would significantly lower the pill burden and the patient safety gets a upper hand. Awareness about the Beers criteria in medical schools and conducting workshops for the same would definitely improvise the quality care for the geriatric group.

REFERENCES

Conry, M. 2000. "polypharmacy:Pandora's medicine chest?". www.geriatrictimes.com/g001028.html (16 may 2005).

Fick, D.M.,Cooper, J.W. et al. 2003. Updating the Beers criteria for potentially inappropriate medication use in older adults. Arch intern Med,163 (22),2716.

Gurwitz, J.H., Field, T.S. et al. 2003. Incidence and preventability of Adverse drug events among older persons in the ambulatory care setting. JAMA, 289 (9),1107.

Williams, C.M. 2002. Using medications appropriately in older adults. Am Fam Physician,66(10),1917.

****